50b

B

- 1. (Twice Amended) A plant for generating high voltage power [An installation] comprising a rotating high-voltage [single-winding/multiple-winding] machine including at least one winding and a converter wherein at least one of a mechanical torque is convertable via the converter into direct current and direct voltage [via the converter without intermediate transformers and/or reactors], and wherein direct current and direct voltage are convertable via the converter into a mechanical torque [without intermediate transformers and/or reactors] said winding including a current carrying conductor and a field confining insulating cover, said current carrying conductor including a plurality of insulated strands and at least one uninsulated strand in contact with the cover.
- 2. (Twice Amended) The plant for generating high voltage power [An installation] according to claim 1, wherein the converter comprises semiconductor devices which are connected and function as at least one of an AC/DC converter and a DC/AC converter.

B

5. (Twice Amended) The plant for generating high voltage power [An installation] according to claim 2, wherein to the AC/DC rectifier there is connected a DC/AC inverter with direct connection to an ac network [without intermediate transformers and/or reactors].

6. (Twice Amended) The plant for generating high voltage power [An installation] according to claim 2, wherein to the dc side of the DC/AC inverter there is connected a DC/AC rectifier with direct connection to an ac network [without intermediate transformers and/or reactors].

7. (Twice Amended) The plant for generating high voltage power [An installation] according to claim 2, wherein the semiconductor devices comprise at least one of thyristors, diodes, triacs, gate turn-off thyristors (GTO), bipolar transistors (BJT), PWM transistors, MOSFET, insulated gate bipolar transistors (IGBT), static induction transistors (SIT), static induction thyristors (SITH), MOScontrolled thyristors (MCT) and components with semiconductor properties.

8. (Twice Amended) The plant for generating high voltage power [An installation] according to claim 1, wherein the converters comprise an integral part of the rotating high-voltage single-winding/multiple-winding machine.

11. (Twice Amended) The plant for generating high voltage power [An installation] according to claim 2, further comprising a common cooling system for the rotating high-voltage single-winding/multiple-winding machine and the semiconductor devices.

13. (Twice Amended) The plant for generating high voltage power [An installation] according to claim 2, wherein the rotating high-voltage [single-

3

By

Burlid

winding/multiple-winding] machine and the semiconductor devices have [the same and] a common ground connection.

15. (Twice Amended) The plant for generating high voltage power [An installation] according to claim 1, wherein the cover [cable] comprises at least one current-carrying conductor, a first layer with semiconducting properties surrounding the conductor; a solid insulating layer, and a second layer with semiconducting properties surrounding the insulating layer.

16. (Twice Amended). The plant for generating high voltage power [A rotating high-voltage single-winding/multiple-winding machine] according to claim 15, wherein the first layer is in electrical contact with and operative at substantially the same potential as the conductor.

17. (Twice Amended) The plant for generating high voltage power [A rotating high-voltage single-winding/multiple-winding machine] according to claim 15, wherein the second layer is operative to form [comprises] an equipotential surface surrounding the conductor.

18. (Twice Amended) <u>The plant for generating high voltage power</u> [A rotating high-voltage, single-winding/multiple-winding machine] according to claim 15, wherein the second layer is connectable to ground potential.

5452

Solg.

19. (Twice Amended) The plant for generating high voltage power [A rotating high-voltage single-winding/multiple-winding machine] according to claim 15, wherein the first layer, the insulating layer and the second layer are joined together to form a monolithic structure which exhibits similar thermal properties, such that, upon a thermal movement in the winding, substantially no defects, cracks, [or] and the like, occur in the cover [insulating parts].

502

Z Z

21. (Twice Amended) The plant for generating high voltage power including a machine having a magnetic circuit including at least one winding [A rotating high-voltage single winding/multiple-winding machine] wherein the magnetic circuit comprises a magnetic core at least one and [one or more] winding[s phase-shifted in space,] wherein the at least one winding[s] comprises a cable including at least one [or more current] carrying conductor[s], [each conductor comprises a number of strands, around each conductor there is arranged] a field confining insulating cover surrounding the at least one conductor including an inner semiconducting layer, [around which there is arranged] an insulating layer of solid insulation surrounding the inner layer, [around which there is arranged] and an outer semiconducting layer surrounding the solid insulation.

22 (Twice Amended) The plant for generating high voltage power [A rotating high-voltage single-winding/multiple-winding machine with a magnetic circuit] according to claim 21, wherein the cable [also] comprises at least one of a metal shield and[/or] a protective layer surrounding the cover.

23 (Twice Amended) The plant for generating high voltage power [A rotating high-voltage single-winding/multiple-winding machine] according to claim 21, wherein the magnetic circuit [is arranged in the] includes at least one of a stator and[/or] rotor of the [rotating electric] machine.

24 (Twice Amended) The plant for generating high voltage power [A rotating high-voltage single-winding/multiple-winding machine] according to claim 21, wherein the outer semiconducting layer is cut off into a number of parts which are separately connected to ground potential.

25. (Twice Amended) The plant for generating high voltage power [A rotating high-voltage single-winding/multiple-winding machine] according to claim 21, wherein [with connection of] the outer semiconducting layer is connected to ground potential[, the electric field of the machine outside the semiconducting layer both in the slots and in the coil-end region will be near zero].

26. (Twice Amended) The plant for generating high voltage power [A rotating high-voltage single-winding/multiple-winding machine] according to claim

21 wherein when the cable comprises <u>a plurality of</u> [several conductors, these are] transposed <u>conductors</u>.

27 (Twice Amended) The plant for generating high voltage power [A rotating high-voltage single-winding/multiple-winding machine with a magnetic circuit] according to claim 21, wherein the <u>at least one</u> current-carrying conductor[/conductors] comprises [both] non-insulated and insulated wires, stranded into a number of layers.

28 (Twice Amended) The plant for generating high voltage power [A rotating high-voltage single-winding/multiple machine with a magnetic circuit] according to claim 21, wherein the <u>at least one</u> current-carrying conductor[/conductors] comprises [both] non-insulated and insulated strands, transposed into a number of layers.

29. (Twice Amended) The plant for generating high voltage power [A rotating high-voltage single-winding/multiple-winding machine with a magnetic circuit] according to claim 23 [21], wherein at least one of the stator and rotor has slots for receiving the winding and wherein the slots are formed as a number of cylindrical openings, extending axially and radially outside one another, with a substantially circular cross section separated by a narrower waist portion between the cylindrical openings.

30. (Twice Amended) The plant for generating high voltage power [A rotating high-voltage single-winding/multiple-winding machine with a magnetic circuit] according to claim 29, wherein [21 the substantially circular cross section of] the cylindrical openings of the slots, counting from a back portion of the [laminated] core[, is designed with] has a continuously decreasing radius.

31. (Twice Amended) The plant for generating high voltage power [A rotating high-voltage single-winding/multiple-winding machine with a magnetic circuit] according to claim 29, wherein [21 the substantially circular cross section of] the cylindrical openings of the slots, counting from a back portion of the laminated core, [is designed with] has a discontinuously decreasing radius.

32 (Twice Amended) The plant for generating high voltage power according to claim 21 [A rotating high-voltage single-winding/multiple-winding machine] wherein the magnetic circuit comprises a [magnetic core and one or more] a plurality of windings, phase-shifted in space, [wherein] and the magnetic core is formed with salient poles.

33 (Twice Amended) The plant for generating high voltage power according to claim 21, wherein the winding [A rotating high-voltage single-winding/multiple-winding machine, characterized in that it] is air-gap-wound.

T

34 (Twice Amended) The plant for generating high voltage power according to claim 21, wherein the magnetic circuit includes an [A rotating high-voltage single-winding/multiple-winding machine, characterized in that the] airgap having a radial flux component [is radial].

35 (Twice Amended) The plant for generating high voltage power according to claim 21, wherein the magnetic circuit includes an [A rotating high-voltage single-winding/multiple-winding machine, characterized in that the] airgap having an axial flux component [is axial].

36. (Twice Amended) A method for manufacturing <u>a plant for generating</u> high voltage power employing a rotating high-voltage [single-winding/multiple-winding] machine having <u>at least one winding and</u> a magnetic circuit with a magnetic core formed with openings for receiving the winding at least one of said openings, being accessible from the outside of the magnetic core, said winding comprising a flexible cable comprising the steps of <u>forming said cable with at least one electrical conductor</u>, and surrounding said conductor with an electric <u>field confining insulating cover</u>, and threading the flexible cable into the opening.

37. (Twice Amended) The [A] method [for manufacturing a magnetic circuit for a rotating high-voltage single-winding/multiple-winding machine] according to claim 36, wherein the machine has a stator and rotor and the

magnetic circuit is arranged in at least one of the stator and the rotor which magnetic circuit comprises at least two windings, and further comprising the step of phase shifting the windings [phase-shifted] in space, and forming [wherein] the openings [comprise] as slots [formed as] with cylindrical openings extending axially and radially outside one another, with a substantially circular cross section for receiving the cable being threaded therethrough.

38. (Twice Amended) The [A] method [for manufacturing a magnetic circuit for a rotating high-voltage single-winding/multiple winding machine] according to claim 37 [36], wherein the magnetic circuit is arranged in at least one of the stator and the rotor and includes salient poles comprising the step of winding the cable around the salient poles.

39. (Amended) A plant for generating high voltage power [An installation] including a rotating high voltage electric machine and a converter, the machine comprising a stator; a rotor and a winding, wherein said winding comprises a cable including at least one current-carrying conductor and a magnetically permeable, electric field confining/insulating cover surrounding the conductor, said cable forming at least one unihterrupted turn in the corresponding winding of said machine said current carrying conductor including a plurality of insulated strands and at least one uninsulated strand in contact with the cover.

Solar Solar

40. (Amended) The [installation of] <u>plant according to</u> claim 39, wherein the cover comprises an insulating layer surrounding the conductor and an outer layer surrounding the insulating layer, said outer layer having a conductivity <u>for establishing</u> [sufficient to establish] an equipotential surface around the conductor.

- 41. (Amended) The [installation of] <u>plant according to claim 39</u>, wherein the cover comprises an inner layer surrounding the conductor and being in electrical contact [therewith] <u>with the at least one uninsulated strand</u>; an insulating layer surrounding the inner layer and an outer layer surrounding the insulating layer.
- 42. The [installation of] <u>plant according to</u> claim 41, wherein the inner and outer layers have semiconducting properties.
- 43. (Amended) The [installation of] <u>plant according to</u> claim 39, wherein the cover is formed of a plurality of layers including an insulating layer and wherein said plurality of layers are <u>joined together to form a monolithic structure</u> and being substantially void free.
- 45. (Amended) The [installation of] plant according to claim 41 [39], wherein the layers of the cover are joined together to form a monolithic structure and have substantially the same temperature coefficient of expansion.

37

50by

Bolive

- 46. (Amended) The [installation of] <u>plant according to claim 41 [39]</u>, wherein the <u>layers of the cover form a monolithic structure having the same</u> temperature coefficient of expansion such that the machine is operable at 100% overload for two hours.
- 47. (Amended) The [installation of] <u>plant according to claim 39</u>, wherein the <u>cover is operable to render the cable [is operable]</u> free of sensible end winding loss.
- 48. (Amended) The [installation of] <u>plant according to claim 39</u>, wherein the <u>cover is operable to render the cable</u> [winding is] operable free of partial discharge and field control.
- 49. (Amended) The [installation of] <u>plant according to claim 39</u>, wherein the winding comprises multiple uninterrupted turns.
- 50. (Amended) The [installation of] <u>plant according to claim 39</u>, wherein the cable is flexible.
- 51. (Amended) The [installation of] <u>plant according to claim 39</u>, wherein the winding is threaded in at least one of the rotor and the stator.

Please add the following new claims:

30 10

--52. A plant for generating high voltage power including a rotating high voltage electric machine and a converter, the machine comprising a stator; a rotor and a

The Total

winding, wherein said winding comprises a cable including at least one current-carrying conductor and a magnetically permeable, electric field confining insulating cover surrounding the conductor, comprising an inner semiconducting layer being in contact with the conductor, a solid insulating layer surrounding the inner layer and a semiconducting outer layer surrounding the insulating layer, said cable forming at least one uninterrupted turn in the corresponding winding of said machine.



- 53. The plant according to claim 52, wherein the current carrying conductor includes a plurality of insulated strands and at least one uninsulated strand in contact with the cover.
- 54. The method according to claim 36 further comprising forming the cover by surrounding the conductor with an inner semiconducting layer, surrounding the inner semiconducting layer with an solid insulation and surrounding the solid insulation with an outer semiconducting layer.

Bould

55. The method according to claim 36, further comprising forming the conductor with a plurality of insulated strands and at least one uninsulated strand and contacting the cover with the uninsulated strand.--